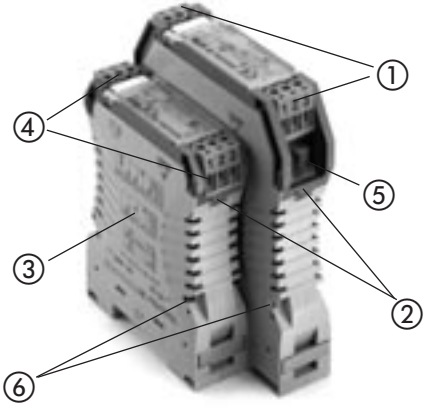
Weidmüller

Operating instructions

WAVECONTROL
Current-monitoring module

RT Nr. 4058720000/07.02



Read these instructions before using the product and retain for future information.

Weidmüller

Schraubanschluss	**Best.-Nr.**
WAS2 CMR 1/5/10A ac	**8516560000**
WAS2 CMR 20/40/60A ac	**8513340000**
WAS1 CMA 1/5/10A ac	**8523400000**
WAS1 CMA LP 1/5/10A ac	**8528650000**
WAS2 CMA 5/10A uc	**8526610000**
WAS2 CMA 20/25/30A uc	**8545830000**
WAS2 CMA 40/50/60A uc	**8513330000**

Zugfederanschluss	**Best.-Nr.**
WAZ2 CMR 1/5/10A ac	**8516570000**
WAZ2 CMR 20/40/60A ac	**8526600000**
WAZ1 CMA 1/5/10A ac	**8523410000**
WAZ1 CMA LP 1/5/10A ac	**8528660000**
WAZ2 CMA 5/10A uc	**8526620000**
WAZ2 CMA 20/25/30A uc	**8545840000**
WAZ2 CMA 40/50/60A uc	**8526590000**

1. General instructions

The WAVECONTROL current-monitoring module should only be installed by qualified personnel. Qualified personnel, as defined in these operating instructions, are persons considered in 0105 Part 1/DIN EN 50110-1 as electrically skilled workers or electrotechnically instructed personnel. The signal conditioner should only be powered up following professional installation.

Caution!
- Electronics units must not be removed from their enclosure when the voltage supply is connected
- The module must be disconnected from the voltage supply when configuring the DIP switches on the printed-circuit board (disconnect the connector from the module)
- Observe ESD regulations

Care must be taken to prevent a direct electrostatic discharge when setting the DIP switches. Regulations of the county in which the modules are to be operated are to be observed (for example, Germany, VDE 0100) when selecting and installing electrical wiring.

2. Application

WAVECONTROL current-monitoring modules, measure DC, AC and non-sinusoidal currents up to 60 A, and can be used for monitoring tasks in diverse areas.
All variables are configured via DIP switches. Further calibration is not necessary. The measurement circuit is galvanically isolated. Measurement results are available for further processing as a relay contact or analog value. All modules are available with pluggable screw or tension clamp connections.

3. Mounting and Settings

3.1 Range adjustments

1. Remove ① connector
2. Press locking clips ② on both sides of the enclosure and pull out the circuit board
3. Make required adjustments to the input range, hysteresis, frequency and relay control using the DIP switches (by print to the side of the enclosure ③).
4. Replace connector after making adjustments
   The connectors have been coded by the manufacturer, ensuring that they cannot be reversed ④.
5. If using the feed-through version, push through enclosing wire ⑤
   Warning!!
   The circuit board can only be inserted in one position.

3.2 Cross-connections for voltage supply ⑥

A maximum feed through of 2 A is possible
The cross-connectors have been coded by the manufacturer, preventing a short circuit should the cross-connectors be reversed

3.3 Modules with relay output

SW3=OFF: hysteresis approx. 5% of the set value
SW3=ON: hysteresis app. 10% of the set value
SW4=OFF: relay switches when input > threshold value
SW4=ON: relay switches when input < threshold value

Signal	Range	SW1	SW2	SW3	SW4	Cat. No.
Input	1 Aac	OFF	ON			**8516560000**
	5 Aac	ON	OFF			**8516570000**
	10 Aac	OFF	OFF			

Signal	Range	SW1	SW2	SW3	SW4	Cat. No.
Input	20 Aac	OFF	OFF			**8513340000**
	40 Aac	ON	OFF			**8526600000**
	60 Aac	ON	ON			

3.4 Modules with analog outputs

Signal	Range	SW1	SW2	SW3	SW4	SW5	Cat. No.
Input	20/40 Auc	OFF	OFF				**8513330000**
	5/25/50 Auc	OFF	ON				**8526590000**
	10/30/60 Auc	ON	OFF				**8526610000**
	AC Current					ON	**8526620000**
	DC Current					OFF	**8545830000**
Output	0...10 V			ON	OFF		**8545840000**
	0...20 mA			OFF	OFF		
	4...20 mA			OFF	ON		

Signal	Range	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	Cat. No.
Input	1 Aac	OFF	OFF	ON						**8523400000**
	5 Aac	OFF	ON	OFF						**8523410000**
	10 Aac	ON	OFF	OFF						
Output	0...10 V				ON	OFF	ON	ON	OFF	
	0...20 mA				OFF	OFF	OFF	OFF	ON	
	4...20 mA				OFF	ON	OFF	OFF	ON	

Signal	Range	SW1	SW2	SW3	SW4	Cat. No.
Input	1 Aac	OFF	OFF	ON		**8528650000**
	5 Aac	OFF	ON	OFF		**8528660000**
	10 Aac	ON	OFF	OFF		
Frequenz	50 Hz				OFF	
	60 Hz				ON	

Signal	Range	SW1	SW2	SW3	SW4	SW5	Cat. No.
Input	5 Aac	OFF	ON				**8526610000**
	10 Aac	ON	OFF				**8526620000**
	AC Current					ON	
	DC Current					OFF	
Output	0...10 V			ON	OFF		
	0...20 mA			OFF	OFF		
	4...20 mA			OFF	ON		

4. Electrical Connection

Pin	CMA	CMA	CMR	CMR	CMA LP
	1/5/10 Aac	40/50/60 Auc	1/5/10 Aac	20/40/60 Aac	1/5/10 Aac
		20/25/30 Auc	1/5/10 Aac	20/40/60 Aac	1/5/10 Aac
		5/10 Auc			
1	NC	24 Vdc	24 Vdc	24 Vdc	NC
2	Input	0 V	0 V	0 V	Input
3	Input	0 V	0 V	0 V	Input
4			NC		
5			Input		
6			Input		
7	24 Vdc	0...10 V		Contact 11	Out+
8	Output	0(4)...20 mA		Contact 12	NC
9	0 V	0 V		Contact 14	Out-
10			Contact 11		
11			Contact 14		
12			Contact 12		
l.d.c. connection		Input*		Input*	

*) Diameter of grommet: 8 mm
NC = no connection

5. Design Variations and Ordering Information

All components are available with pluggable screw (WAS) or tension clamp connection (WAZ).

Input	Output
1/5/10 A ac, selectable	0(4)...20 mA/0...10 V
1/5/10 A ac, selectable	4...20 mA, loop powered
1/5/10 A ac, selectable	1 relay, changeover contact
20/40/60 A ac, selectable	1 relay, changeover contact
5/10 A ac/dc, selectable (TRMS)	0(4)...20 mA / 0...10 V
40/50/60 A ac/dc, selectable (TRMS)	0(4)...20 mA / 0...10 V
20/25/30 A ac/dc, selectable (TRMS)	0(4)...20 mA / 0...10 V

Type	Input	Output	Cat. No.	Enclosure
WAS2 CMR	1/5/10 A ac	Relay	**8516560000**	WAVEBOX L 22,5
WAZ2 CMR	1/5/10 A ac	Relay	**8516570000**	WAVEBOX L 22,5
WAS1 CMA	1/5/10 A ac	Analog	**8523400000**	WAVEBOX S 22,5
WAZ1 CMA	1/5/10 A ac	Analog	**8523410000**	WAVEBOX S 22,5
WAS1 CMA LP	1/5/10 A ac	Analog	**8528650000**	WAVEBOX S 22,5
WAZ1 CMA LP	1/5/10 A ac	Analog	**8528660000**	WAVEBOX S 22,5
WAS2 CMA	5/10 A ac/de	Analog	**8526610000**	WAVEBOX L 22,5
WAZ2 CMA	5/10 A ac/de	Analog	**8526620000**	WAVEBOX L 22,5
WAS2 CMR	20/40/60 A ac	Relay	**8513340000**	WAVEBOX L 22,5
WAZ2 CMR	20/40/60 A ac	Relay	**8526600000**	WAVEBOX L 22,5
WAS2 CMA	40/50/60 A ac/dc	Analog	**8513330000**	WAVEBOX L 22,5
WAZ2 CMA	40/50/60 A ac/dc	Analog	**8526590000**	WAVEBOX L 22,5
WAS2 CMA	20/25/30 A ac/dc	Analog	**8545830000**	WAVEBOX L 22,5
WAZ2 CMA	20/25/30 A ac/dc	Analog	**8545840000**	WAVEBOX L 22,5

6. Accessories

	Cat. No.
Cross-connection ZQV 2,5N/2 black	**1718080000**
Cross-connection ZQV 2,5N/2 red	**1717900000**
Cross-connection ZQV 2,5N/2 blue	**1717990000**
Cross-connection ZQV 2,5N/2 yellow	**1693800000**
Terminal connector, 3-pole	
for screw-type connection BLZ 5.08/3 SN OR	
– orange	**1526560000**
– black	**1526510000**
Terminal connector, 3-pole	
for tension clamp connection BLZF 5.08/3	
– orange	**1707470000**
– black	**1707700000**
Connector markers	
– WS 10/5 Multicard for plotter labelling	**1635010000**
– WS 10/5 blank	**1060860000**

7. CE Labeling of WAVECONTROL Modules

WAVECONTROL modules carry the CE Mark and comply with the requirements of the EU guidelines 89/336/EWG “Electromagnetic Compatibility” and the therein listed harmonized European Norms (EN).
The EU declarations of conformity are held for the relevant authorities, in accordance with Article 10 of the above mentioned EU guideline, at the following address :

Weidmüller Interface GmbH & Co.
Postfach 30 30
32720 Detmold
Tel. +49 5231 14-0
Fax +49 5231 14-2083
e-mail: info@weidmueller.com
www.weidmueller.com

CE